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09/602,727	06/26/2000	Michael D. Kotzin	CS 10462	2908

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Motorola Inc  
Personal Communications Sector  
Intellectual Property Department (PJB)  
600 North US Highway 45 Rm AN475  
Libertyville, IL 60048

EXAMINER

LE, DANH C

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/602,727

Applicant(s)

KOTZIN, MICHAEL D.

Examiner

DANH C. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24, 26-32 and 34-42 is/are rejected.
- 7) ☒ Claim(s) 25 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**1. Claims 1, 4-33, 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyziak (US 6,125,279) in view of Sim (US 2003/0093167).**

As to claim 1, Hyziak teaches a method for receiving a radio communication in a radio communication system (figure 1 and col.5, line 33-col.6, line 60), the method comprising:

a first mobile station (14A) for receiving radio communications from the remote radio intended for one or more of the plurality of mobile stations (14B-I).

receiving the radio communication from the remote radio (base station 10) at the first mobile station (14) of the plurality of mobile stations, and

transmitting a local radio communication from the first mobile station to an intended recipient mobile station of the plurality of mobile stations (14A).

Hyziak fails to teach selectively assigning one mobile station among of the plurality of mobile stations, each of which is capable of receiving radio communications directly from a remote radio. Sim teaches selectively assigning one mobile station among of the plurality of mobile stations, each of which is capable of receiving radio communications directly from a remote radio (paragraph 0035). Therefore, it would

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have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 3, the combination of Hyziak and Sim teaches the method of claim 1, wherein selective assigning comprises: among a plurality of mobile stations, sequentially assigning one mobile station of the plurality of mobile station as the first mobile station (Sim, paragraph 0035)

As to claim 4, the combine of Hyziak and Sim teaches the method of claim 1 wherein selectively assigning comprises:

among the plurality of mobile stations, assigning the first mobile station to receive the radio communication (Hyziak, col.5, line 33-col.6, line 60).

As to claim 5, the combine of Hyziak and Sim teaches the method of claim 1 wherein selectively assigning comprises:

assigning the first mobile station to receive radio communications during a predetermined time period (Hyziak, col.5, line 33-col.6, line 60).

As to claim 6, the combine of Hyziak and Sim teaches the method of claim 1 wherein selectively assigning comprises:

assigning the first mobile station to receive radio communications n subsequently, de-assigning the first mobile station and assigning another mobile station of the plurality of mobile stations to receive radio communications (Hyziak, col.5, line 33-col.6, line 60).

As to claim 6, the combine of Hyziak and Sim teaches the method of claim 1 wherein selectively assigning comprises:

among the plurality of mobile stations. identifying a mobile station having best radio reception characteristics; and

assigning the identified mobile station as the first mobile station (Hyziak, col.5, line 33-col.6, line 60).

As to claim 8, the combine of Hyziak and Sim teaches the method of claim 1 further comprising:

decoding data in the radio communication,

identifying an intended recipient in the data; and

when the intended recipient corresponds to a mobile station of the plurality of mobile stations, transmitting the local radio communication from the first mobile station to the intended recipient mobile station (Hyziak, figure 7).

As to claim 9, the combine of Hyziak and Sim teaches the method of claim 8 further comprising:

when the intended recipient does not correspond to a mobile station of the plurality of mobile stations, discarding the radio communication (Hyziak, col.5, line 33-col.6, line 60).

As to claim 10, the combine of Hyziak and Sim teaches the method of claim 1 further comprising:

transmitting from one mobile station of the plurality of mobile stations to a remote radio of the radio communication system identification information for each Mobile station of the plurality of mobile stations (Hyziak, col.5, line 33-col.6, line 60).

As to claim 11, the combine of Hyziak and Sim teaches the method of claim 10 further comprising:

transmitting radio communications intended for any mobile station of the plurality of mobile stations during a common predefined time period (Hyziak, col.5, line 33-col.6, line 60).

As to claim 12, the combine of Hyziak and Sim teaches the method of claim 1 further comprising:

receiving the radio communication in accordance with a first radio communication protocol, and

transmitting the local radio communication in accordance with a second radio communication protocol (Hyziak, col.5, line 33-col.6, line 60).

As to claim 13, the combine of Hyziak and Sim teaches the method of claim 12 further comprising:

transmitting the local radio, communication at a relatively low transmit power for local reception by the plurality of mobile stations (Hyziak, col.5, line 33-col.6, line 60).

As to claim 14, Hyziak teaches a mobile station operable in a radio communication system (figure 4, col.5, line 33-col.6, line 60), the mobile station comprising:

a first radio circuit (52);

a local radio circuit (10), and

a control circuit operable in conjunction with the first radio circuit to decode a radio communication from a remote radio and operable in conjunction with the local radio circuit to transmit to an intended recipient from one or more of a plurality of mobile stations, located locally relative to the mobile station, a local radio communication in response to the radio communication.

Hyziak fails to teach selectively assigned to receive radio communications from the remote radio for the one or more of the plurality of mobile stations, each of which is capable of receiving radio communications directly from the remote radio. Sim teaches selectively assigned to receive radio communications from the remote radio for the one or more of the plurality of mobile stations, each of which is capable of receiving radio communications directly from the remote radio (paragraph 0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 15, Hyziak teaches the mobile station of claim 14 wherein the control circuit is further operable to identify an intended recipient of the radio communication and transmit the local radio communication to an associated mobile station when the intended recipient is the associated mobile station (figure 7).

As to claim 16, Hyziak teaches the mobile station of claim 14 wherein the first radio circuit (figure 4, 40, 50) comprises:

a receiver operable on a cellular radio communication system; and  
a transmitter operable on the cellular radio communication system.

As to claim 17, the combine of Hyziak and Sim teaches the mobile station of claim 16 wherein the local radio circuit comprises:

a local receiver operable in a short range radio communication system including at least the associated mobile station, and

a local transmitter operable in the short range radio communication system (Hyziak, paragraph 0035).

As to claim 18, Hyziak teaches the portable electronic device (figure 4, paragraph 0035) comprising:

receiving means for receiving downlink radio transmissions from a remote radio (14B).

local transmitting means for radio communication of data to an associated portable electronic device from the one or more of a plurality of portable electronic devices, each of which is capable of receiving radio communications directly from the remote radio, in response to the downlink radio transmissions (14G, 14I).

Hyziak fails to teach selectively assigned to receive radio communications for one or more of a plurality of portable electronic devices. Sim teaches selectively assigned to receive radio communications for one or more of a plurality of portable electronic devices (paragraph 0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim



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into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 19, Hyziak teaches the portable electronic device (figure 7) of claim 1.8 further comprising:

decoding means for decoding the downlink radio transmission in conjunction with the receiving means.

As to claim 20, Hyziak teaches the portable electronic device (figure 7) of claim 19 further comprising:

control means for determining an intended recipient of the downlink radio transmission.

As to claim 26, Hyziak teaches a radio communication (figure 1 and col.5, line 33-col.6, line 60) method comprising:

cooperating among a plurality of locally positioned mobile stations (14B-I), each capable or directly receiving downlink radio transmissions from a remote base station (10) in a radio communication system at the one mobile station,

receiving a downlink radio communication at the one mobile station (16B) in accordance with a first radio communication protocol of the radio communication system,

decoding the downlink radio communication to identify an intended recipient of the downlink radio communication (col.5, lines 13-25), and

when the intended recipient is another station of the plurality of locally positioned mobile stations, transmitting information about the downlink radio communication to the

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other mobile station using a low-power local radio communication protocol (col.5, lines 13-25).

Hyziak fails to teach assigning one mobile station of the plurality or locally positioned mobile stations to receive downlink radio transmissions from the remote base station. Sim teaches assigning one mobile station of the plurality or locally positioned mobile stations to receive downlink radio transmissions from the remote base station (paragraph 0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 27, Hyziak teaches the radio communication method of claim 26 wherein transmitting information comprises transmitting data in accordance with the Bluetooth radio communication protocol (col.5, line 33-col.6, line 60).

As to claim 28, Hyziak teaches a radio communication (figure 1) method comprising:

defining a local group of mobile stations in radio communication with one or more remote radios of a radio communication system (14A-I).

subsequently, receiving the downlink transmissions (received downlink from base station 10).

identifying in the downlink transmissions data intended for one or more members of the local group (col.5, lines 13-25); and

communicating the data from the first mobile station to the one or more members over a local radio communication system (col.5, line 33-col.6, line 60).

Hyziak fails to teach within the local group, assigning a first mobile station for receiving downlink transmissions from the one or more remote radio. Sim teaches within the local group, assigning a first mobile station for receiving downlink transmissions from the one or more remote radio (col.7, lines 55-col.8, lines 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 29, Hyziak teaches a method (figure 1 and col.5, line 33-col.6, line 60) comprising:

wirelessly communicating among a local group of electronic devices within local communication range of the other electronic within the local group and within radio communication range of a remote radio;

receiving at an assigned electronic device a radio transmission from the remote radio;

when the one or more intended recipients corresponds to a member of the local group other than the assigned electronic device, wirelessly communicating to the member information about the radio transmission.

Hyziak fails to teach the assigned electronic device, determining one or more intended recipients of the radio transmission. Sim teaches the assigned electronic

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device, determining one or more intended recipients of the radio transmission (paragraph 0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 30, Hyziak teaches the method of claim 29 wherein wirelessly communicating comprises:

transmitting data from a first member the local group intended for one or more other members of the local group; and

receiving the data at at least some or the one or more other members of the group (col.5, line 33-col.6, line 60).

As to claim 31, the combine of Hyziak and Sim teaches the method of claim 29 further comprising:

assigning the assigned electronic device for receiving radio transmissions from the remote radio for all members of the local group (Sim, paragraph 0035).

As to claim 32, the combine of Hyziak and Sim teaches the method of claim 31 wherein assigning comprises;

designating one electronic device Dr the, local group as the assigned electronic device based on a performance characteristic for at least some of the members of the local group (Sim, paragraph 0035).

As to claim 35, Hyziak teaches the method of claim 31 further comprising:

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distributing assignment for receiving radio transmissions from the remote radio for all members of the local group among all members of the local group (col.4, line 15-col.5, line 58).

As to claim 36, Hyziak teaches the method of claim 29 further comprising:

distributing assignment for receiving radio transmissions from the remote radio among members of the local group (col.4, line 15-col.5, line 58).

As to claim 37, Hyziak teaches the method of claim 29 wherein receiving a receiving a radio transmission comprises;

detecting a downlink transmission from a remote radio;

decoding the downlink transmission to extract data embedded in the downlink transmission; and

identifying the one or more intended recipients in response to the data (col.4, line 15-col.5, line 58).

As to claim 38, the combine of Hyziak and Sim teaches the method of claim 29 wherein wirelessly communicating comprises:

transmitting information from a first electronic device according to a predefined wireless data communication protocol; and

receiving the information at at least a second electronic device (Hyziak, col.4, line 15-col.5, line 58).

As to claim 39, the combine of Hyziak and Sim teaches the method of claim 38 wherein the predefined wireless protocol comprises the Bluetooth standard (Hyziak, col.4, line 15-col.5, line 58).

As to claim 40, the combine of Hyziak and Sim teaches the method of claim 28 wherein the transmission range of the radio communications with the remote radios is greater than ten kilometer and the transmission range of the radio communications over the local radio communication system is less than 100 meters (Hyziak, col.4, line 15-col.5, line 58).

As to claim 41, Hyziak teaches the method for receiving a radio communication in a radio communication system (figure 1), the method comprising:

energizing at least some of the circuitry needed for receiving radio communications from the remote radio in at least one or more of the plurality of mobile stations which are not range, while radio communications from the remote radio are being transmitted;

receiving the radio communication from the remote radio at the first mobile station of the plurality mobile stations; and transmitting a local radio communication from the first mobile station to an intended recipient mobile station of the plurality of mobile stations.

Hyziak fails to teach among a plurality of mobile stations, selectively assigning one mobile station of the plurality of mobile stations as a first mobile station for receiving radio communications from the remote radio. Sim teaches among a plurality of mobile stations, selectively assigning one mobile station of the plurality of mobile stations as a first mobile station for receiving radio communications from the remote radio (paragraph 0035). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Sim into the system of Hyziak in

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order to establish a communication link between mobile devices and the base stations which has the best reception.

As to claim 42, the combine of Hyziak and Sim teaches the method of claim 41 wherein the circuitry not energized includes one or more of analog front end circuitry, decoder, and controllers (Hyziak, figure 4, 66).

**2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyziak and Sim in view of Anvekar (US 6,377,805).**

As to claim 2, the combine of Hyziak and Sim teaches the method of claim 1 which assigning the mobile station as the first mobile station for receiving radio communications among the plurality of mobile stations, the combine of Hyziak and Sim fails to teach the selectively identifying a mobile station having particular battery characteristic. Anvekar teaches the selectively identifying a mobile station having particular battery characteristic (col.4, lines 25-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Anvekar into the system of Hyziak in order to establish a communication link between mobile devices and the base stations which has the best battery strength.

**3. Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hyziak in view of Nounin (US 2004/0224719).**

As to claim 21, Hyziak teaches a method for operating a mobile radio communication station (figure 1 and col.5, line 33-col.6, line 60), the method comprising:

- receiving a downlink radio transmission from a remote radio (14B);
- determining an intended recipient of the downlink radio transmission (14A); and

when the intended recipient corresponds to an associated mobile station, which is located locally relative to the mobile radio communication station receiving the downlink radio transmission, and transmitting information about the downlink radio transmission to the associated mobile station on a low power local radio link (col.6, lines 55-60).

Hyziak fails to teach selectively disabled direct communication with the remote radio. Nounin teaches disabled direct communication with the remote radio (figure 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Nounin into the system of Hyziak in order to efficiently transmit data to remote mobile station.

As to claim 22, Hyziak teaches the method of claim 21 further comprising:  
using the low power radio link, coordinating reception of subsequent downlink radio transmissions among a plurality of mobile radio communication stations including at least the associated mobile station (col.5, line 33-col.6, line 60).

As to claim 23, Hyziak teaches the method of claim 22 wherein coordinating reception comprises:

assigning a respective reception interval to each mobile radio communication station of the plurality of mobile radio communication stations (col.5, line 33-col.6, line 60).

As to claim 24, Hyziak teaches the method of claim 22 wherein coordinating reception comprises:



dedicating one mobile radio communication station of the plurality of mobile radio communication stations to reception of subsequent downlink radio transmissions based on a reception parameter (col.5, line 33-col.6, line 60).

As to claim 25, the combine of Hyziak and Sim teaches the method of claim 24 wherein dedicating comprises:

determining received signal strength for at least one downlink radio communication;  
comparing respective received signal strengths for each mobile radio communication station of the plurality of mobile radio communication stations; and dedicating as the one mobile radio communication (the mobile radio communication having best respective received signal strength (paragraph 0035)).

**4. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hyziak and Sim.**

As to claim 34, the combine of Hyziak and Sim teaches the method of claim 1 which assigning one mobile station of the plurality of mobile stations as the first mobile station among the plurality of mobile stations, Hyziak fails to teach sequentially assigning another mobile station of the plurality of mobile stations. However, the sequentially assigning another mobile station of the plurality of mobile stations is obvious since the selective based on received signal strength indicator are know in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of sequentially assigning another mobile

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station into the system of Hyziak and Sim in order to establish a communication link between mobile devices and the base station which has the best reception.

***Allowable Subject Matter***

Claims 25 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 25 and 33, the teaching of above prior arts either alone or in combination fails to teach the reciting limitations of these claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-272-3050.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in cursive script, appearing to read "danh", is written over a horizontal line.

July 4, 2005

DANH CONG LE  
PATENT EXAMINER